MODIS Technical Team Meeting
Thursday, November 16, 2000
3:00-4:30 PM

Vince Salomonson chaired the meeting. Present were Eric Vermote, Steve Platnick, Michael King, Harry Montgomery, Wayne Esaias, Sol Broder, Ed Masuoka, Bob Murphy, Bruce Guenther, Skip Reber, Dorothy Hall, Steve Kempler, Mark Domen, Barbara Conboy, Bruce Ramsay, and Chris Justice, with Rebecca Lindsey taking the minutes.

1.0 Schedule of Upcoming events

· PORSEC 2000 Goa, India	December 5-8
· AGU Fall Meeting San Francisco, CA	December 15-19
· MCST Meeting Columbia Sheraton Hotel	January 22, 2001 (afternoon)
· Land Validation Meeting Columbia Sheraton Hotel	January 22-23, 2001
· Ocean Group Meeting Columbia Sheraton Hotel	January 23, 2001
· Atmosphere Group Meeting GSFC (Bldg. 33, H114)	January 23, 2001
· MODIS Science Team Meeting Columbia Sheraton Hotel	January 24 - 26, 2001
· EOS Investigator Working Group meeting Ft. Lauderdale, Florida	January 30 - February 1, 2001
· SWGD Data Distribution Workshop	February 1, 2001 (at the IWG)

2.0 Meeting Minutes

2.1 Instrument Update

Aqua

Mark Domen reported that vibration vibration testing has been completed for x and y axes; z-axis testing is taking place November 16th and 17th. So far MODIS is doing OK. The sunshade moved quite a bit, but did not crack. Next week they will do the shock and

deployment test, and the week after thanksgiving they will be doing the post-dynamic, comprehensive performance tests. The projected date for thermal vacuum testing is the first week of February, with the spacecraft being placed into the chamber the last week of January.

Terra

Domen restated the information that Mike Roberto gave at the last technical team meeting, which is that the switch to Terra B-side electronics has been successful in reducing noise in the ADCs, and that there have been no more formatter upsets.

2.2 MCST Update

Guenther presented a summary of issues relating to the switch from A-side to B-side electronics. (See Attachment 1.) With respect to sensor performance, there are no changes in detector functionality, noise, or out-of-family (OOF) behavior compared to A-side. The expected improvements from changing Vdet/Itwk were achieved. The look up tables (LUTs) necessitated by both the switch to B-side and the changes to Vdet/Itwk are ready to be delivered to the GDAAC as of November 16th. These LUTs were released to Oceans, Land, and Atmosphere groups for L2 validation purposes.

MCST's concern with these LUTs is that there appears to be a difference in the radiances between subframes 1 and 2 in the SWIR bands (5-7). This could indicate a non-linear gain. There is an unexpected change in the subframe differences between measurements taken with the solar diffuser screen down and measurements with it up. The differences could be the 5-micron thermal leak issue, a correction for which is not incorporated into the LUTs that MCST provided to the disciplines for early testing. If MCST tests reveal that the subframe differences are minimized by turning on the correction for the 5-micron thermal leak, then MCST will redeliver updated LUTs.

Vermote commented that minimizing the difference between subframes is of the highest priority for the land discipline. He requested regular, perhaps weekly, meetings with MCST as MCST works on the problem, so as to remain totally informed about the progress being made. Platnick indicated that the Atmosphere group also would like to be involved in those discussions.

Montgomery reported that based on questions and comments on MCST's presentation on October 26 about their recommendation to go to the 79/110 Itwk/Vdet focal plane bias configuration, they thoroughly reviewed their model of the SRCA. Based on that review and suggestions from Jim Young, they produced a summary memo. Montgomery feels they have a reliable model, and in particular believes that they have verified that the ripple cross talk previously discussed does, in fact, exist.

2.3 GDAAC Update

Kempler reported that the GDAAC has processed through day 296 to L1B, which is 64 days of 98% completeness or better (of the data they received). All of those data are now archived. On day 287 there are two hours of unrecoverable data. Users could now get thirty days (in a row) if they wanted. Salomonson commented that the Project had reported at the MSR that they are pleased with the GDAAC's steady production.

2.4 SDST Update

MODAPS is at day 290-291, and given their lag behind the GDAAC, they have about 55 days of steady data production at Level 2. Masuoka also reported that the Ocean Level 3 products were delivered and ingested into the GDAAC on Tuesday, November 14, with no failures.

2.5 Project Update

Headquarters' request for briefing on data set production and distribution

Salomonson passed out a letter from Jack Kaye at NASA HQ requesting information from Terra Instrument teams about data processing schedules, flows and issues. They would like to have a briefing on December 1, 2000. MODIS has been allotted an hour and a half to answer the questions listed in the memo (see Attachment 2).

Salomonson asked that disciplines prepare responses to each of the questions in the memo, and provide them to him by early next week, so that there is time to review and make some generalizations across disciplines. He said that he would send out an email to the group with a copy of the letter from HQ indicating what he would like from them. (See action item 4.1.)

Justice suggested that the discipline leaders have a telecon to discuss the issues and reach consensus on the responses. Murphy agreed to arrange the telecon, which should also include Masuoka and Kempler. (See action item 4.2.)

Among the issues they need to discuss:

- Which products are available, and how instrument readiness impacted (and is impacting) product release schedules. Justice suggested using the tables in Yoram Kaufman's SWAMP report from January 1999 as a starting point.
- What has been accomplished with respect to characterization and/or validation, with an emphasis on validation campaigns and upcoming meetings, as well as the planned special edition of *Remote Sensing of the Environment.*
- How well the data production and distribution systems are operating, including meeting current demands as well as any additional processing. Reber suggested this might be a good chance to talk about the issues Chris brought up in a presentation he gave recently at Sarah Grave's ESAAC sub-committee meeting on data systems.

Salomonson asked what he said at that meeting. Justice said his presentation was centered around the evolution of NewDIS and the transition from ECS, and that he also talked about the need for hardware and that our system is not prepared for any upsets. Justice believes they understand that our system can not currently handle both forward processing and reprocessing simultaneously. (See action item 4.3 and 4.4).

IWG Meeting

Salomonson reported that Jim Closs has allotted MODIS two hours worth of presentation time at the upcoming IWG meeting. Closs's suggestion was perhaps four half-hour overviews. Salomonson also reported that Steve Running is asking for more time. In the meantime, Salomonson suggested preparing the four overview presentations, but also encouraging people to bring posters to enhance the presentations. (See action item 4.5.)

MODIS Science Team Meeting (MST)

Salomonson reported that there still was no specific design or format planned for the MST meeting. Justice recommended it be focused on showing how MODIS is meeting the ten-year, strategic research plan of the Earth Science Enterprise. There was some discussion about which strategy plan he was referring to, but Salomonson believed he knew which one Justice meant, and he would look into the idea.

Salomonson asked how many presentations each discipline would need. Justice said that Land might need 4-6; Platnick said that Atmosphere would need about the same number as last year; Esaias said Oceans would need maybe 5-6.

Murphy suggested that they flesh this out during the telecon. He also suggested that if HQ does not attend the IWG, that we should take a presentation to them. Salomonson indicated that he would like to have Bill Townsend and Al Diaz get a similar presentation.

2.6 Golden Month Discussion

Salomonson stated that he is sensing a resistance to the idea of the Golden Month. He asked if this was simply a matter of terminology, or something more. He suggested that perhaps we should simply refer to it as a "steady-state" month, implying that it is a month's worth of consistently-processed data.

Masuoka commented that in preparing PGEs for the Golden Month, Level 1B and Oceans PGEs are having to adjust for the switch to B-side electronics. This adjustment takes longer for the Oceans discipline because they must adjust their lookup tables after seeing results from the Level 1B PGE. Esaias said that if there is an immediate need for this "steady-state" month, Oceans is more prepared to go back and do April to achieve that goal than it is to begin processing current data. This would both achieve the steady-state month, and further their validation efforts, since April is a campaign month for Oceans. King agreed that April would be a good month to work on. Vermote, Justice and

Platnick expressed concern about not going continuing to go forward, especially in light of the need to characterize the instrument thoroughly after the A-side/B-side change.

Alternatively, Oceans could be ready to provide their B-side LUTs by December 1st. They could be in operations by December 15th. MODAPS projects that they will be reaching data day 304-305--the day of the switch to B-side--around December 1st. Any data beyond day 304-305 that MODAPS processes before December 15th (when the Oceans LUTs will be in operations) will produce poor-quality Oceans products. If MODAPS does hit day 304-305 on December 1st, this will result in the first two weeks of November being poor-quality Oceans products.

Salomonson said that if Oceans would commit to being ready by this timeline, he would agree to begin the steady-state month in mid-December. Esaias said that Oceans could meet that deadline barring any unforeseen instrument problems. Salomonson said that we would wait for Oceans to be ready, and then in mid-December we would begin the steady-state month, which will run until mid-January. To him this would mean making no instrument, algorithm or other changes during that time that would impact the products.

Salomonson asked if someone could prepare an article for the Earth Observer about MODIS product availability. Justice said he was working on something like that for Land. Murphy asked if disciplines could recommend a time period with the most internal consistency for people to use. Esaias said Oceans couldn't do that until after processing begins with their B-side LUT changes on December 15th.

Kempler raised a question about promoting a particular month as a great data month. If the products were to degrade after that, or if forward data production stopped (as it would currently have to if we began major reprocessing), would we be setting ourselves up for a great deal of criticism? Salomonson replied that if we can get a good month out and people are excited about it, then the community will be more likely to bring their weight down on getting the resources we need to maintain that high-quality production.

Kempler also asked what, if any, position the team wanted him to present to ECS with respect to their maintaining stability during this period. He said he anticipates ECS wanting to make changes to prepare for Aqua. Salomonson said he would simply like to get ready for the steady-state month on December 15, and that other issues would be decided down the road.

2.7 NOAA/NESDIS Update

Ramsay reported that they had been discussing with the Cooperative Institute for Meteorological Satellite Studies at the University of Wisconsin (Madison) the possibility of their creating MODIS snow and ice products from MODIS Direct Broadcast as an interim solution to the delayed high-speed network line between Goddard and NB4.

They are also moving forward with getting an ocean color product evaluation and validation group together, and he requested that the leader of that group, Lt. Mike

Hopkins, be allowed to attend the technical team meetings. Salomonson agreed to that suggestion.

2.8 Snow and Ice Update

Hall reported that Aqua code for the test is getting ready to be delivered by George Riggs and Hugh Powell.

2.9 EOSDIS Update

With respect to the EOS data policy and software release, Reber brought with him the latest version of the policy statement for Masuoka to review. He did not think it contained a position on release of software to the public.

2.10 Oceans Update

Esaias reported that he attended the GDAAC User Working Group meeting early in the week. Stan Moraine of UNM had been made the chair. Esaias felt the meeting was productive, and he felt hopeful that it will lead to more support for the GDAAC. Kempler commented that the next SWAMP meeting will address the issue of quantifying distribution. Panel members at the GDAAC UWG were very displeased with the idea of 1x distribution capability. The DAAC already has three requests for their complete collection of data.

3.0 Action Items Carried Forward

3.1 Salomonson: Work with Yoram Kaufman and Skip Reber to produce some metrics from the science community to describe the status of data processing as accurately as possible.

Status: Ongoing.

3.2 MODIS Science Team: Send updates on MODIS metadata terms/valids to Skip Reber (reber@skip.gsfc.nasa.gov). These are terms that enable users to search MODIS data. This is part of a request to the Terra Instrument teams to update metadata terms.

Status: Ongoing. Group needs Reber to clarify, reiterate the request.

3.3 Masuoka: Represent MODIS concerns on data throughput to EDOS.

Status: Ongoing. The Review Committee is now preparing a report articulating the impacts to the community.

3.4 Kempler to provide a hardware upgrade schedule, including direction on processing power.

Status: Ongoing.

3.5 Need discussion between SDST and NOAA on completeness of data and process by which we can get more rapid turn around on snow cover and also perhaps sea surface temperature.

Status: Ongoing.

3.6 Murphy asked disciplines leads to provide final updates to product release table.

Status: Ongoing.

3.7 Discipline leads to meet to resolve the issue of beta release code and science-quality code, and what we need to say about it.

Status: Ongoing.

3.8 Murphy to draft an official request regarding GDAAC processing during the wait for the new look up tables.

Status: Closed.

3.9 Reber to find a data policy statement to the effect that the project had planned to release all software to the public.

Status: Closed. Lindsey distributed email at Reber's request.

4.0 New Action Items

4.1 Salomonson to email discipline leaders and others about the request for a briefing to HQ on data, and what he would like from them to prepare.

Status: Closed.

4.2 Murphy to arrange telecon for discipline leaders and other in response to Salomonson's request in item 4.1.

Status: Closed. Meeting was held Tuesday 11/21/00.

4.3 Justice to share with discipline leaders, Salomonson, and Murphy viewgraphs of presentation he gave at Sarah Grave's committee meeting.

4.4 Justice to provide an informal report to Salomonson about what went on at that meeting.

4.5 Vince to send an email to science team about preparing presentations for the IWG meeting.